Appl. No. 10/015,959
Response Dated July 17, 2006
Reply to Office Action of May 16, 2006

REMARKS

Claims 1-21 are pending in this application. Claims 1, 5, 7, 11, 13, 15, 18, and 20 have been amended. No new matter has been added. Favorable reconsideration and allowance of the standing claims are respectfully requested.

Claims 1-21 were rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent Number (USPN) 6,714,985 to Malagrino et al. ("Malagrino") in view of USPN 6,453,357 to Crow et al. ("Crow"). Applicant respectfully traverses the rejection.

Independent claim 1 has been amended to recite "determining whether all packet fragments for said packet have been received by collecting offset values in a verification table, indexing collected offset values by position in said verification table, and evaluating said collected offset values to identify any missing positions between said starting position and said ending position." Independent claims 11, 13, 15, and 18 have been similarly amended.

To form a *prima facie* case of obviousness under 35 U.S.C § 103(a) the cited references, when combined, must teach or suggest every element of the claim. *See e.g.* MPEP § 2143.03. Applicant submits that Malagrino and Crow, taken alone or in combination, fail to teach or suggest each and every element of independent claims 1, 11, 13, 15, and 18, as amended.

According to the Office Action of November 1, 2006 on page 3, Crow does not disclose "determining whether all packet fragments have been received by indexing offset value in a verification table."

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According to the present Office Action on pages 2-3, Malagrino discloses "said intermediate node to index said offset values by position in verification table to identify any missing positions between said starting position and said ending position (see col. 10, lines 6-11), the logic 530 determines when all fragments of a reassembly (fragment) packet have been received...A frame that does not require reassembly, however, is assigned a unique index value)(see col. 7, lines 51-52), the controller 500 stores the received frame in the frame buffer 420 and creates an entry in the CAM subsystem 700 that identifies the fabric frame and its location in the buffer 420)(see col. 8, lines 17-20).

Malagrino teaches:

> Specifically, the CAM subsystem stores information about the length of each packet currently being reassembled. That is, the CAM maintains information about the IP total length of each packet and the accumulated (i.e., current) length of all received fragments belonging to that packet. The information relating to these two length parameters indicate whether all fragments belonging to a particular packet have been received. The IP total length of the reassembled packet is derived from the last fragment of the packet by adding its IP fragment offset and its IP total length. Note that the last fragment may comprise the last received fragment or the fragment having a reset MF flag. When the current length equals the total length for a given packet, the reassembly process starts and the packet is assembled starting with its first fragment whose pointer to the frame buffer is stored in the CAM. *See e.g.,* col. 3, line 57- col. 4, line 30.

> The data section 750 of an entry 710 comprises a pointer (PTR) field 752 that contains an address of a fragment stored in the frame buffer 420. A current length (CLEN) field 754 contains the sum of lengths of all frame fragments that have been received at the engine 400. The CLEN field is populated when the first fragment entry is created and is then updated as each subsequent frame fragment arrives at the engine. A total length (TLEN) field 756 contains the total length of a reassembled fragmented packet. The

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> TLEN field is populated with a zero value when the first
> fragment entry is created and is updated with a valid value
> when the fragment carrying the total length (i.e., the
> fragment with MF=0) is received. The fields 754, 756 are
> only valid for a first fragment and, as noted, only those
> entries 710 with their FFM bits 726 asserted have valid
> CLEN and TLEN values. *See e.g.*, col. 9, lines 50-65.

> In accordance with the invention, the packet reassembly
> process takes place when the packet total length (TLEN)
> value in field 756 equals the packet current length (CLEN)
> value stored in field 754 of the CAM subsystem 700. In this
> case, the CAM subsystem 700 is searched for references to
> all fragments 212 belonging to the particular packet 210
> that is to be reassembled. The first fragment of this packet
> is identified as having the fragment offset value in field 114
> of its header equal to zero; this "zero offset" fragment is
> identified by a predetermined COS value and a valid IDX
> field 724. Note that a fragment 212 may be distinguished
> from a packet 210 based on the states of the MF flag 112
> and the fragment offset field 114.

In view of the above, Malagrino teaches determining whether all packet fragments
have been received by comparing a valid CLEN field of a first fragment to a valid TLEN
field of the first fragment. The CLEN field contains the sum of lengths of all frame
fragments that have been received, which is populated when the first fragment entry is
created and is then updated as each subsequent frame fragment arrives. The TLEN field
contains the total length of a reassembled fragmented packet, which is populated with a
zero value when the first fragment entry is created and is updated with a valid value when
the fragment carrying the total length (i.e., the fragment with MF=0) is received. The
CLEN and TLEN fields are only valid for the first fragment. When the CLEN field of
the first fragment equals the TLEN field of the first fragment for a given packet, the
reassembly process starts and the packet is assembled.

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As such Malagrino clearly fails to teach or suggest at least "determining whether all packet fragments for said packet have been received by collecting offset values in a verification table, indexing collected offset values by position in said verification table, and evaluating said collected offset values to identify any missing positions between said starting position and said ending position" as recited in amended independent claims 1, 11, 13, 15, and 18.

Therefore, even if Malagrino and Crow could be combined, which Applicant does not admit, such combination would still fail to teach or suggest all the features of amended independent claims 1, 11, 13, 15, and 18. Furthermore, if an independent claim is non-obvious under 35 U.S.C. § 103, then any claim depending therefrom is non-obvious. *See* MPEP § 2143.03, for example.

For at least the reasons set forth above, Applicant submits that independent claims 1, 11, 13, 15, and 18 are allowable and that dependent claims 2-10, 12, 14, 16, 17, and 19-21 are allowable by virtue of their dependency, as well as on their own merits. Accordingly, removal of the § 103(a) rejection of claims 1-21 is respectfully requested.

Applicant does not otherwise concede, however, the correctness of the Office Action's rejection with respect to any of the dependent claims discussed above. Accordingly, Applicant hereby reserves the right to make additional arguments as may be necessary to further distinguish the dependent claims from the cited references, taken alone or in combination, based on additional features contained in the dependent claims that were not discussed above. A detailed discussion of these differences is believed to be unnecessary at this time in view of the basic differences in the independent claims pointed out above.
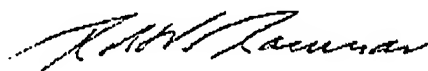
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It is believed that claims 1-21 are in allowable form. Accordingly, a timely

Notice of Allowance to this effect is earnestly solicited.

The Examiner is invited to contact the undersigned at 724-933-9344 to discuss

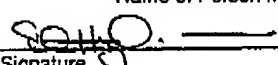any matter concerning this application.

Respectfully submitted,

KACVINSKY LLC

Robert V. Racunas, Reg. No. 43,027
Under 37 CFR 1.34(a)

Dated: July 17, 2006

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Deborah L. Higham
Name of Person Mailing Correspondence

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